

### REMARKS

The present remarks are responsive to the Office Action mailed on February 03, 2006. Claims 1, 7 and 8 have been amended. Claim 9 has been canceled by previous amendment. Support for the amendments can be found, inter alia, in Applicants' specification and original claims. Also accompanying this communication is a petition to extend the prosecution on this matter for three months and the appropriate fee.

In view of the amendments and the following remarks, Applicants respectfully submit that pending claims **1-8**, and **10-14** are in condition for allowance and Applicants respectfully request allowance of such claims.

#### Discussion of the Office Action

In the Office Action of February 03, 2006, the Examiner rejected claims 1-7 and 14 under 35 U.S.C. §103(a) as being unpatentable over Demizu et al. (U.S. Patent No. 5,547,794), he rejected claims 1, 3, 8, and 19 under 35 U.S.C. §103(a) as being unpatentable over Tavlarides et al. (U.S. Patent No. 5,817,239) and he rejected claims 1, 4-7 and 11-14 under 35 U.S.C. §103(a) as being unpatentable over Tavlarides et al. (U.S. Patent No. 5,817,239) in view of Moskovitz (U.S. Patent No. 5,948,726).

#### Discussion of the rejection of claims 1-7 under 35 U.S.C. §103(a)

As set forth above, claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Demizu et al. (U.S. Patent No. 5,547,794). Applicants respectfully traverse the rejection.

Under MPEP §2143.03:

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974). Applicant respectfully traverses such a rejection.

Applicants' amended independent claims 1 and 7 are as follows:

Claim 1:

A composition comprising:

a mixture consisting essentially of (1) a dried hydrophobic sol-gel functionalized with at least one arsenic-removing constituent and (2) **a solid support structure additionally functionalized with at least one arsenic-removing constituent.**

Claim 7:

A composition comprising:

a predetermined amount of a hydrophobic aerogel functionalized with at least one arsenic-removing constituent; and

a predetermined amount of **granulated activated carbon additionally functionalized with at least one arsenic-removing constituent**, wherein said composition is capable of removing arsenic contaminants from aqueous media.

Regarding base claims 1 and 7, Applicants submit that Demizu et al. (U.S. Patent No. 5,547,794) **does not** disclose or suggest the highlighted limitations of Applicants' amended claims 1 and 7 as shown above and as mandated under §MPEP 2142 and *In re Royka*.

The Examiner states with respect to claims 1 and 7 that Demizu et al disclose "a granulated composition comprising....active carbon...." and he cites (column 9, lines 28-31) in such reference to support his argument. Demizu in that cited section states, "Various types of **organic and inorganic pigments** of varying colors **can be used as coloring agents** in the present invention. For instance, preferred black pigments include.....active carbon..." However, as exemplified by the highlighted and underlined portions shown directly above of the cited section in Demizu et al and as detailed in such reference, such an application is for the purpose of adding color to a toner with no teaching or suggestion for removing arsenic. Conversely, Applicants disclose a composition (see page 4, paragraph [00010], lines 4-7) and claim a composition having a solid support structure functionalized with at least one arsenic removing constituent as shown in amended claim 1 above or a granulated active carbon functionalized with at least one arsenic removing constituent as shown in amended claim 7.

Therefore, Applicants submit that Demizu et al does not teach, disclose or suggest expressly or impliedly all of the claim limitations of Applicants' base claims 1 and 7 as mandated under MPEP §2143.03.

Accordingly, Applicants respectfully submit that the rejections of claims 1 and 7 under 35 U.S.C. §103(a) are deemed improper and are requested to be removed.

Regarding dependent claim 14, such claim directly depends from independent claim 1, which is deemed unobvious in light of the comments shown above.

Under MPEP §2143.01, "If an independent claim is nonobvious under 35 U.S.C. §103, then any, claim depending therefrom is nonobvious." *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Accordingly, Applicants respectfully submit that the rejection of dependent claims 14 under 35 U.S.C. §103(a), is also deemed improper the rejection is requested to be removed as mandated under MPEP §2143.01.

Discussion of the rejection of claims 1-3, 8, and 10 under 35 U.S.C. §103(a)

As set forth above, claims 1-3, 8, and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tavlarides et al. (U.S. Patent No. 5,817,239). Applicants respectfully traverse the rejection.

Once again, under MPEP §2143.03:

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art."  
*In re Royka*, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974). Applicant respectfully traverses such a rejection.

Applicants' amended independent claims 1 and 8 are as follows:

Claim 1:

A composition comprising:

a mixture consisting essentially of (1) a dried hydrophobic sol-gel functionalized with at least one arsenic-removing constituent and (2) **a solid support structure additionally functionalized with at least one arsenic-removing constituent.**

Claim 8:

A method comprising:

providing a dried hydrophobic sol-gel on a solid support structure,  
wherein said dried hydrophobic sol-gel and **said solid support structure are  
functionalized with at least one arsenic-removing constituent;**

contacting said dried hydrophobic sol-gel on a solid support structure  
to an aqueous sample; and

analyzing said dried hydrophobic sol-gel on said solid support structure after  
contacting it with said aqueous sample in order to detect the presence and/or  
concentration of arsenic.

Regarding base claims 1 and 8, Applicants respectfully submit that Tavlarides et al. (U.S. Patent No. 5,817,239) **does not** disclose or suggest the highlighted limitations of Applicants' amended claims 1 and 8 as shown above and as mandated under §MPEP 2142 and *In re Royka*. Specifically, Tavlarides et al. (U.S. Patent No. 5,817,239) does not disclose a composition having a dried hydrophobic sol-gel and a solid support structure functionalized with at least one arsenic-removing constituent as shown highlighted above in amended base claims 1 and 8.

Accordingly, Applicants respectfully submit that the rejections of claims 1 and 8 under 35 U.S.C. §103(a) are deemed improper and are requested to be removed.

Regarding dependent claims 2-3 and 10, claims 2-3 directly depend from independent claim 1 and dependent claim 10 depends from base claim 8, wherein the

base claims are deemed unobvious in light of the amendments and comments shown above.

Under MPEP §2143.01, "If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious." *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Accordingly, Applicants respectfully submit that the rejection of dependent claims 2-3 and 10 under 35 U.S.C. §103(a), is also deemed improper and the rejection is requested to be removed as mandated under MPEP §2143.01.

Discussion of the rejection of claims 1, 4-7 and 11-14 under 35 U.S.C. §103(a)

As set forth above, claims 1, 4-7 and 11-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tavlarides et al. (U.S. Patent No. 5,817,239) as applied above, and further in view of Moskovitz et al. (U.S. 5,948, 726). Applicants respectfully traverse the rejection.

Again, under MPEP §2143.03:

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art."  
*In re Royka*, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974). Applicant respectfully traverses such a rejection.

Applicants have amended independent claims 1 and 7 as shown and as discussed above. Applicants, similar to the arguments for the rejection of claims 1 and 8 under 35 U.S.C. §103(a) with respect to Tavlarides, respectfully submit that Tavlarides et al. (U.S. Patent No. 5,817,239) alone or in combination with the secondary reference

Moskovitz, **do not** disclose or suggest a composition having a solid support structure additionally functionalized with at least one arsenic-removing constituent as shown in amended base claim 1, nor do the references alone or in combination disclose or teach a predetermined amount of granulated activated carbon functionalized with at least one arsenic-removing constituent as shown in amended base claim 7 as mandated under MPEP §2143.03 .

Applicants respectfully submit that base claims 1 and 7 should not warrant an obvious rejection under 35 U.S.C. §103(a) based on the cited references and accordingly, the rejection of claims 1 and 7 under 35 U.S.C. §103(a) is respectfully requested to be removed.

Regarding dependent claims 4-6 and 11-14, such claims directly or indirectly depend from either independent claim 1 or independent claim 8, both of which are deemed unobvious in light of the amendments to such claims and as similarly discussed above for the rejection of claims 1 and 7 under 35 U.S.C. §103(a).

Under MPEP §2143.01, "If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious." In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Accordingly, Applicants respectfully submit that the rejection of dependent claims 4-7 and 11-14 under 35 U.S.C. §103(a), is also deemed improper and the rejection is requested to be removed as mandated under MPEP §2143.01.

### CONCLUSION

The undersigned respectfully submits that the rejections of the claims raised in the Office Action dated February 3, 2006 have been fully addressed and overcome, and the present application is believed to be in condition for allowance.

It is respectfully requested that this application be reconsidered and that pending claims 1-8 and 10-14 in this case be passed to issue. In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that can be clarified with a telephone conference, he is respectfully requested to initiate the same with the undersigned at (925) 422-3682.

Respectfully submitted,

Dated: \_\_\_\_\_

8/3/06



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